

DT15 PCT/PTO 09 JUL 2004

**PATENT COOPERATION TREATY
INTERNATIONAL BUREAU OF WIPO**

International Appl. No.: PCT/US03/03779 Authorized Officer: Frederic Sontag
International Filing Date: 07 February 2003
Priority Date: 08 February 2002
Applicant: GRAPHIC PACKAGING CORPORATION
Applicant (DO/US): Patrick H. WNEK et al.
Title: INSULATING MICROWAVE INTERACTIVE PACKAGING

Mail Stop PCT
Commissioner of Patent and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

LETTER IN REPLY TO WRITTEN OPINION

This reply is submitted pursuant to rule 66.3 in response to the Written Opinion mailed 29 October 2003, making this reply due on or before 29 December 2003. Please consider the arguments presented in the Remarks section below.

Remarks

This Reply is submitted in response to the Written Opinion dated 29 October 2003. Claims 1-156 are pending in this application. In the Written Opinion it is indicated that claims 1-156 are novel and possess the requisite industrial applicability. Moreover, it is indicated that claims 148, 150 and 51 possess the requisite inventive step. However, it is indicated that claims 1-144 lack inventive step under PCT article 33(3) as being obvious over U.S. Patent 5,317,118 to Brandberg et al ("Brandberg") in view of U.S. Patent 5,217,768 to Walters et al ("Walters"). It is further indicated that claims 145-147, 149, and 152-156 lack inventive step under PCT article 33(3) as being obvious over U.S. Patent 5,180,894 to Quick et al ("Quick") or WO 91/07861 to General Mills ("General Mills") in view of U.S. Patent 6,303,913 to Bono et al ("Bono").

I. Claims 1-8

In the Written Opinion, Brandberg is combined with Walters to render the invention of claims 1-8 obvious. It is respectfully submitted that there is no suggestion or motivation to combine the teachings of Brandberg with Walters. As recognized by the Examiner,

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Brandberg only discloses a flat susceptor sheet. On the other hand, Walters does not recognize the use of an insulating layer in combination with a microwave interactive layer to insulate at least a portion of the microwave interactive layer and the food from the environment of the microwave oven. Absent the teachings of the present application, there is no suggestion or motivation in the cited references to combine the teachings to render the invention of claims 1-8 obvious. As such, it is believed that claims 1-8 possess the requisite inventive step under PCT article 33(3), and such indication is respectfully requested.

II. Claims 9-20

In the Written Opinion, it appears that the features of claims 1-8 are addressed with particularity. However, claims 9-20 differ from claims 1-8, and the features of claims 9-20 do not appear to be addressed with particularity. As such, further citation and explanation or further action on the merits with respect to claims 9-20 is respectfully requested.

III. Claims 21-135

Claims 21-135 also differ from claims 1-8. In the Written Opinion, the various novel aspects of claims 21-135 do not appear to be addressed. Thus, further citation and explanation or further action on the merits with respect to claims 21-135 is respectfully requested.

Despite not appearing to be particularly addressed, Brandberg and Walters are cited with respect to claims 21-135. Thus, some of the patentable differences between claims 21-135 and Brandberg and Walters are recited below. Claims 21, 22, 64, 65, and 107 are independent claims, and claims 23-63 depend from claim 21, 22 or both, and claims 66-106 depend from claim 64, 65 or both. The particular limitations of the independent and dependent claims are not recited in detail. Generally speaking, the independent claims define apparatus and methods with various combinations and arrangements of a first vapor impermeable substrate, a layer of microwave interactive material, a dimensionally stable substrate, and a second vapor impermeable substrate. In conjunction with the various combination and arrangements of layers, bond lines form a pattern of closed cells that upon impingement of microwave energy expand to define insulating pockets.

Brandberg does not recognize the use of vapor impermeable substrates as taught by the present application and defined in the claims. Moreover, Brandberg does not disclose the particular arrangements of vapor impermeable substrates, dimensionally stable substrates, and a microwave interactive layer to provide lofting insulating cells as required by the claims.

Walters does not recognize or discuss defining closed cells that expand upon impingement of microwave energy. Moreover, Walters does not disclose the particular

arrangements of vapor impermeable substrates, dimensionally stable substrates, and a microwave interactive layer arranged to provide lofting insulating cells as required by the claims.

Because Walters does not recognize the concept of expandable cells to form insulation, there is no suggestion or motivation to combine the teachings of Brandberg with Walters. Moreover, even if combined, the combination of Brandberg and Walters does not disclose or suggest the particular arrangements of substrates, layers, and the like, as defined in independent claims 21, 22, 64, 65, and 107. Thus, for at least the reasons recited above, it is respectfully submitted that claims 21, 22, 64, 65 and 107 possess the required inventive step under PCT article 33(3) and are not obvious over the combination of Brandberg and Walters. Claims 23-63 depend from and include the limitations of claim 21, 22 or both, and claims 66-106 depend from and include the limitations of claim 64, 65 or both. Thus, for at least the same reasons as the independent claims, it is respectfully submitted that the dependent claims also possess the required inventive step under PCT article 33(3).

IV. Claims 145-147

Claim 145 is an independent claim. With respect to Bono, the Written Opinion indicates that "Bono shows a microwave package with a carton and a pouch having a microwave interactive material 20 and a support structure 70 supporting the pouch in an upright positioning for microwave cooking a food in the pouch (see Figures 1-8 and col. 3, lines 59 – col. 5, line 61)." It is respectfully submitted that Bono only discloses a carton, and does not also disclose a pouch comprising microwave interactive material supported by the carton as required by claim 145. Particularly, Bono states that "[w]ith reference to Fig. 1, one embodiment of the microwave package of the present invention is shown generally as reference numeral 10. The package includes inner susceptor layer 20, outer layer 30, vent holes 40, and score lines 15. The package is assembled to form a pocket 50 which holds the food products to be heated." Bono, col. 4, lines 27-33. As such, the package disclosed in Bono includes an inner susceptor layer, and the food is placed in the package against the inner susceptor layer. In contrast, the invention of claim 145 includes a pouch comprising the microwave interactive layer that is supported by the carton.

Further, Bono does not disclose or suggest that the package taught therein may support a pouch, such as is provided in claim 145, or that it may support the microwave cooking tube of Quick or the wrapper of General Mills. Moreover, as recognized by the Examiner, neither Quick nor General Mills show a structure for supporting the sleeve in an

upright position. Thus, there is no suggestion or motivation to combine the teachings of Quick or General Mills with Bono.

Moreover, both the cooking tube and the cooking sleeves have outer paper layers. It is believed that if the cooking tube or the sleeve were placed in the package of Bono, the inner susceptor layer of the Bono package might ignite the tube or sleeve causing the food therein to burn as well as causing a significant hazard for the person using the combination. As such, the combination of Quick or General Mills with Bono is improper as the combinations would not operate for their intended purposes.

Thus, for at least the reasons recited above, it is respectfully submitted that claim 145 possesses the requisite inventive step under PCT article 33(3) and is not obvious over the combination of Quick or General Mills with Bono. Claims 146 and 147 depend from and include all of the limitations of claim 145. Thus, at least for the same reasons as claim 145, it is respectfully submitted that claims 146 and 147 possess the requisite inventive step under PCT article 33(3).

V. Claims 149 and 152-156

Claim 149 defines a microwave cooking container with a first end providing a foundation for maintaining the container in an upright position when the first end is placed upon a surface. As recognized by the Examiner, Neither the Quick nor the General Mills reference discloses a structure for holding the package in an upright position. Moreover, as discussed above, the combination of Quick or General Mills with Bono, is believed improper as there is no suggestion to make the combination and the combination of the Quick or General Mills wrappers would potentially ignite if inserted into the Bono package. Thus, it is respectfully submitted that claim 149 has the necessary inventive step under PCT article 33(3) and is not obvious over the combination of Quick or General Mills with Bono. Claims 152 and 156 depend from and include all of the limitations of claim 149. Thus, at least for the same reasons as claim 149, it is respectfully submitted that claims 152-156 have the necessary inventive step under PCT article 33(3) and are not obvious over the combination of Quick or General Mills with Bono.

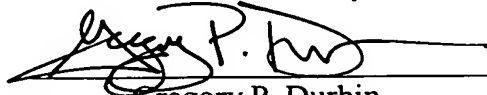
Conclusion

For at least the reasons cited above, it is believed that claims 1-147, 149, and 152-156 possess the requisite inventive step under PCT article 33(3), and such indication is respectfully requested.

Applicant believes no fees are due in connection with this Letter in Reply to Written Opinion. In the event any fees are due, please charge Deposit Account 04-1415.

Dated this 29th day of December, 2003.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory P. Durbin", written over a horizontal line.

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Agent for Applicants

**TRANSMITTAL LETTER TO THE
UNITED STATES RECEIVING OFFICE**

PTO-1382 (Rev. 04-2003) (Modified)

PCTUS2.FRP /REV03

Date	29 December 2003 (29.12.2003)
International Application No.	PCT/US03/03779
Attorney Docket No.	11460WO.01

EV016647999US

I. Certification under 37 CFR 1.10 (if applicable)

EV 016 647 999 US
Express Mail mailing number

29 December 2003
Date of Deposit

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Signature of person mailing correspondence

Jane Lohs /DORSEY & WHITNEY LLP
Typed or printed name of person mailing correspondence

II. ☐ New International Application

TITLE	MICROWAVE INTERACTIVE PACKAGING
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Earliest priority date (Day/Month/Year)
08 February 2002 (08.02.2002)

SCREENING DISCLOSURE INFORMATION: In order to assist in screening the accompanying international application for purposes of determining whether a license for foreign transmittal should and could be granted and for other purposes, the following information is supplied. (Note: check as many boxes as apply):

- A. ☐ The invention disclosed was not made in the United States.
- B. ☐ There is no prior U.S. application relating to this invention.
- C. ☐ The following prior U.S. application(s) contain subject matter which is related to the invention disclosed in the attached international application. (NOTE: priority to these applications may or may not be claimed on form PCT/RO/101 (Request) and this listing does not constitute a claim for priority).

application no.		filed on	
application no.		filed on	

- D. ☐ The present international application contains additional subject matter not found in the prior U.S. application(s) identified in paragraph C. above. The additional subject matter is found on pages and ☐ DOES NOT ALTER ☐ MIGHT BE CONSIDERED TO ALTER the general nature of the invention in a manner which would require the U.S. application to have been made available for inspection by the appropriate defense agencies under 35 U.S.C. 181 and 37 CFR 5.1. See 37 CFR 5.15.

III. ☐ A Response to an Invitation from the RO/US. The following document(s) is (are) enclosed:

- A. ☐ A Request for An Extension of Time to File a Response
- B. ☐ A Power of Attorney (General or Regular)
- C. ☐ Replacement pages:

pages		of the request (PCT/RO/101)	pages		of the figures
pages		of the description	pages		of the abstract
pages		of the claims			

- D. ☐ Submission of Priority Documents

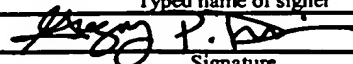
Priority document		Priority document	
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- E. ☐ Fees as specified on attached Fee Calculation sheet form PCT/RO/101 annex

IV. ☐ A Request for Rectification under PCT 91 ☐ A Petition ☐ A Sequence Listing Diskette

V. ☒ Other (please specify): Letter in Reply to Written Opinion (5 pages) and Return Acknowledgement Postcard

The person signing this form is the:

<input type="checkbox"/> Applicant	Gregory P. Durbin
<input checked="" type="checkbox"/> Attorney/Agent (Reg. No.)	Typed name of signer
<input type="checkbox"/> Common Representative	 Signature

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: BRAD J. HATTENBACH
370 SEVENTEENTH STREET, SUITE 4700
DENVER, COLORADO 80202-5647

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing
(day/month/year)

29 OCT 2003

Applicant's or agent's file reference

11460WO.01

REPLY DUE

within TWO months
from the above date of mailing

International application No.

PCT/US03/03779

International filing date (day/month/year)

07 FEBRUARY 2003

Priority date (day/month/year)

08 FEBRUARY 2002

International Patent Classification (IPC) or both national classification and IPC
Please See Supplemental Sheet.

Applicant

GRAPHIC PACKAGING CORPORATION

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 08 JUNE 2004

Name and mailing address of the IPEA/US

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

PHILIP H. LEUNG

Telephone No. (703) 308-1710

I. Basis of the opinion**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed
- ☒ the description:
pages 1-49 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the claims:
pages 50-78 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the drawings:
pages 1-26 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the sequence listing part of the description:
pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

WRITTEN OPINION

International application No.

PCT/US03/03779

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	<u>1-156</u>	YES
	Claims	<u>NONE</u>	NO
Inventive Step (IS)	Claims	<u>148, 150 AND 151</u>	YES
	Claims	<u>1-147, 149 AND 152-156</u>	NO
Industrial Applicability (IA)	Claims	<u>1-156</u>	YES
	Claims	<u>NONE</u>	NO

2. citations and explanations

Claim 1-147 lack an inventive step under PCT Article 33(3) as being obvious over Brandberg et al (US 5,317,118), in view of Walters et al (US 5,217,768).

Brandberg et al discloses a microwave cooking device and method including a microwave package having a microwave interactive material and an insulating material covering the food product from the oven environment except that the microwave interactive material does not surround the food as it uses a flat sheet of microwave susceptor adjacent the food (see Figures 1-10 and col. 2, line 50 - col. 6, line 42). Walters et al shows a microwave package for microwave heating food including a microwave susceptor material completely surrounding the food to be heated (see Figures 2-11 and col. 4, line 34 - col. 10, line 42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brandberg et al to surround the food completely with the microwave susceptor so that the entire food can be uniformly cooked for a better food product, in view of the teaching of Walters et al. The exact arrangement of the insulating material and the material of the microwave interactive susceptor would have been a matter of engineering expediences depending on the type and shape of the food product to be cooked.

Claims 145-147, 149 and 152-156 lack an inventive step under PCT Article 33(3) as being obvious over Quick et al (US 5,180,894) or General Mills Inc. (WO 91/07861), in view of Bono et al (US 6,303,913).

Quick et al or General Mills Inc. discloses the claimed microwave package with a carton and microwave interactive material for supporting the food to be microwave heated (see Quick et al, Figures 4-11 and col. 3, line 60 - col. 5, line 58 and General Mills Inc. Figures 1-23 and page 8, line 34 - page 17, line 24). They fail to show a structure for supporting the package in an upright position. Bono shows a microwave package with a carton and a pouch having a microwave interactive material 20 and a support structure 70 for (Continued on Supplemental Sheet.)

WRITTEN OPINION

International application No.

PCT/US03/03779

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:
IPC(7): H05 B 6/80; B65D 81/34 and US Cl.: 219/730, 732, 734, 762; 426/107, 234, 343; 99/DIG. 14

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

supporting the pouch in an upright position for microwave cooking a food in the pouch (see Figures 1-8 and col. 3, line 59 - col. 5, line 61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Quick et al or General Mills Inc. to use a support structure for holding the package in an upright position on the floor for better cooking result, in view of the teaching of Bono et al.

Claims 148, 150 and 151 meet the criteria set out in PCT Article 33(2) and (3) because the prior art does not teach or fairly suggest the specific structure of a microwave package having a carton, a pouch, a microwave interactive material comprising a specific insulating microwave packaging material as claimed.

Claims 1-147, 149 and 152-156 meet the criteria set out in PCT Article 33(2) because there is no single reference which shows all the elements or the method steps for a microwave food packaging as claimed therein.

Claims 1-156 meet the criteria set out in PCT Article 33(4) as the invention as claimed has industrial applicability, such as, for cooking and/or heating food product in a microwave oven.

----- NEW CITATIONS -----

NONE

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